Anti-personnel Landmines: A Combat Multiplier

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Anti-personnel Landmines: A Combat Multiplier

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INTRODUCTION

Increased international pressure has placed the United States (US) on a path to losing one of the most effective weapons in the inventory, the anti-personnel landmine (APL). In 1996, US administration began the destruction of all nonself-destructing “dumb” APLs. Following this, the 1997 Ottawa Convention effectively banned the use of APLs, which prompted the US to decline signature to the convention until alternative means could be developed to replace all self-destructing (SD) and self-neutralizing (SN) APLs in the inventory. However, as pressure increases on the US, the US will likely adhere to the full context of the Ottawa Convention and eventually comply with the ban on the use of SD and SN APLs. As a result, US policy has set the conditions that will eventually negate a significant combat multiplier and create a gap in US forces’ warfighting capability.

HISTORY

The APL was introduced to US warfare by the Confederate Army during the US Civil War. Although crude in construct, the APL’s demoralizing effect on enemy forces ensured the further development and employment of APLs during subsequent wars and conflicts throughout the world. As a result, widespread concerns have recently arisen,

primarily due to the increasing proliferation of mines and their humanitarian impact on non-combatants.[1]

Traditionally, APL employment rested primarily with large-scale professional militaries; however, recognizing that landmines were relatively inexpensive, extremely effective, and easily duplicated, other nations and non-nation states have produced, distributed, and employed APLs indiscriminately at an alarming scale in unmarked and eventually forgotten minefields. Subsequently, in the early 1980's the first self-neutralizing systems with a selection of self-destruct times were deployed.[2] From these developments the US developed the "family of scatterable mines" (FASCAM), which can be delivered by ground launcher, helicopter, fixed-wing aircraft or artillery" and are ideal in supporting US doctrine of "fast-paced maneuver warfare".[3]

As a result of the effects of extensive mine proliferation and employment throughout the world, the International Committee of the Red Cross estimates that 60-70 million APLs still pose a hazard to people throughout the world, ultimately producing upwards of 26,000

[1] National Research Council. *Alternative Technologies to Replace Antipersonnel Landmines*. Washington DC: National Academy Press, 2001, 1.
[2] NRC, 12
[3] NRC, 13
[4]Office of Humanitarian Demining Programs. *Hidden Killers*. Washington, DC: United States Department of State Bureau of Political-Military affairs, 1998, 13.

casualties per year.[4] Thus, beginning in 1997 the Ottawa Convention banned the use of all APLs, which increased international pressure on non-signators, such as the US, to abide by its mandate.[5]

THE OTTAWA CONVENTION AND THE IMPACT ON UNITED STATES POLICY

The Ottowa Convention of 1997 banned all APLs to include: "APLs used alone, APLs used in mixed systems, and APLs that are self-destructing and self-deactivating."[6] As of Sept 2000, 139 nations had signed or acceded the Ottawa convention, including all NATO member states, except the US and Turkey.[7] Two primary concerns dominated the US position. First, the US saw the need for a transition period in order to phase out APLs, allowing for the development of newer alternatives. Second, the US saw the need to maintain its mixed AP/Anti-tank (AT) mine systems as additional protection against dismounted breaching.[8] President William J. Clinton further refined US policy on the use of APLs when he stated:

> I'm directing the Department of Defense to develop alternatives to antipersonnel land mines so that by the year 2003 we can end even the use of self-destruct land mines… everywhere but Korea. As for

[5] NRC, 14
[6] NRC, 14
[7] NRC, 15
[8] NRC, 15

> Korea, my directive calls for alternatives to be ready by 2006. In short, this program will eliminate all antipersonnel land mines from America's arsenal. (Clinton, 1997)[9]

President Clinton set the conditions to end the use of APLs by US forces in both defensive and offensive operations.

COMBAT MULTIPLIER IN THE DEFENSE

Anti-personnel landmines are used primarily as a defensive economy of force measure by denying terrain to an enemy.[10] Subsequently, fewer forces are required to cover or guard a specific area. Concurrently, APLs contribute to the force protection of friendly forces by blocking or denying friendly gaps vulnerable to enemy exploitation.

Anti-personnel landmines also contribute greatly to shaping the battlespace for decisive action. APLs can be used to assist a screening or covering force in their initial task of hindering or damaging an advancing enemy, promoting caution in an advancing foe, degrading enemy tempo, and shaping enemy actions to meet friendly intentions.[11] For example, APLs supplement AT mines to create a synergistic effect, protecting AT mines from rapid

[9] NRC, 15
[10] Ottignom, David A. *Losing Anti-Personnel Landmines: An Economy of Force*. Newport, RI: Naval War College, 1997, 4.
[11] Sloan, C. E. E. *Mine Warfare on Land*. London*Oxford*Washington, DC*New York*Toronto*Sydney*Frankfurt: Brassey's Defense Publishers, 13.

breaching or tampering by the enemy and making obstacles and barriers more complex and difficult to breach.

Furthermore, APLs can play a significant role in ensuring the continuous flow of sustainment to combat forces. In rear area operations, defined as "those functions of security and sustainment required to maintain continuity of operations by the whole force",[12] APLs serve to provide rear area protection for Combat Service Support (CSS) units, thereby ensuring the sustainment effort of the force and prevention of enemy interference.

Most important is the APL's psychological effect on the enemy. "Because war is a clash between opposing human wills, the human dimension is central in war;"[13] therefore, "the greatest effect of fires is generally not the amount of physical destruction they cause, but the effect of the physical destruction on the enemy's moral strength".[14] The APL's ability to generate surprise, confusion, and physical casualties among an already desperate enemy will act as a force multiplier, inflicting significant psychological damage to an attacking enemy. Three major factors that amplify this psychological fear are: "loss of control,

[12] Department of the Navy, Headquarters U.S. Marine Corps. *Marine Corps Doctrinal Publication 1-0* (MCDP 1-0). Washington, DC: GPO, 1997, 8,12.
[13] Department of the Navy, Headquarters U.S. Marine Corps. *Marine Corps Doctrinal Publication 1* (MCDP 1). Washington, DC: GPO, 1997, 13.
[14] MCDP 1, 16.

helplessness, and inability to fight back against APLs; the perception of risk, which varies by individual and is related to loss of control; and the high level of uncertainty that continues even after an area appears to be clear of APLs".[15]

COMBAT MULTIPLIER IN THE OFFENSE

Applications of APLs also contribute to shaping the battlespace in support of offensive operations. The employment of APLs offers several options in which a commander can reduce risk when maneuvering forces throughout the battlespace. APLs integrated with AT mines enable the commander to produce a vulnerability on enemy maneuver that can be exploited by friendly forces, cause the enemy to break up his forces. Additionally, APLs enable the commander to deconflict competing requirements for flank security and the main effort while scatterable mines, as an economy of force, provide a powerful capability to respond quickly to infiltration and attack of CSS units and logistics trains.[16] Furthermore, scatterable mines consisting of an AP and AT mine mix enable friendly forces to quickly disrupt and/or delay enemy reinforcements

[15] Kolasinski, E. M. *The psychological Effects of Anti-Personnel Landmines: A Standard to Which Alternatives Can Be Compared.* Engineering Psychology Laboratory Report 99-2. West Point, NY: U.S. Military Academy.
[16] Ottignom, 7.

or reserve capability as well as deny the enemy lines of communication. Ultimately, APLs facilitate a commander's abiity to disrupt an enemy's command and control capability contributing directly to the operational tempo of friendly forces as a whole.

Although an APL affords friendly forces numerous advantages when used to support offensive and defensive operations, the only APL in the US arsenal that meets the requirements set forth by the Ottawa Convention is the command detonated claymore mine.[17] Although an effective mine, the claymore's primary limitation is the requirement for observation, which reduces stand-off for friendly forces. As a result, research and development has been initiated to develop alternatives that provide friendly to enemy stand-off range, determine friend or foe, and maintain the same destructive power of current APL systems.

DEGREDATION OF CAPABILITY

By 2006, several new alternatives are expected to be fielded, all of which are non-lethal, sensor to shooter based, or require observation. These alternatives will be effective in terms of early warning, but far less effective in terms of their destructive power, psyschological effect, and economy of force benefits resident in traditional APL

[17] NRC, 41

systems. With the increased reliance on technology for the functioning of these systems, one can expect that environmental effects, emissions from other systems, and characteristics of terrain and vegetation will either substantially degrade the effectiveness and reliability of these systems or render them irrelevant. Consequently, the inadequacies found in alternatives will create a greater gap in US forces' offensive and defensive capability.

CONCLUSION

Although the tragic consequences of landmine employment are evident throughout the world and will continue to adversely affect lives for decades to come, one must consider the benefits found in the application of current APL systems and the consequences of denying their use to US Armed Forces. Unfortunately, proponents of the Ottawa Convention are limited in their views to only the humanitarian impact rather than the APLs' numerous contributions to warfighting. As a result, research and development of future APL systems that meet the requirements of the Ottawa Convention fall far short of possessing the same effects as traditional APL, are slow in development, and unlikely to be available before 2010 at best.

Fortunately for US forces, the US has not yet fully complied with the mandates of the Ottawa Convention in terms of SD and SN APLs. Although the US should maintain and allow US forces to employ the full spectrum of APLs to increase combat power and enhance warfighting capabilities, it is unlikely that this will occur as international pressure increases to abide by the Ottawa Convention. As a result, it is evident that the US will eventually subsume to the demands of the Ottawa Convention, thus ensuring the loss of all APL systems. Consequently, relieving its forces of the ability to employ this frightenly effective weapon against potential enemies, creating a significant gap in US forces warfighting capability and loss of a significant combat multiplier.

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